

## Executive Summary

- (2) Increasing intercarrier compensation rates from reciprocal compensation to access will increase the prices charged for VoIP services, and thus reduce the attractiveness of VoIP services relative to other offerings. If VoIP applications are less desirable, then some portion of those consumers who would have purchased ILEC broadband services (*i.e.*, DSL) in order to take advantage of VoIP services will no longer do so.<sup>13</sup> These DSL revenues that are "lost" as a result of the demand suppression resulting from access charges applied to IP-PSTN VoIP services offset the increase in ILEC switched revenues, mitigating the total increase in ILEC revenues.

Table 2 below isolates each of these offsetting impacts relative to the final results discussed in Table 1 above.

**Table 2**  
**Detailed Presentation of Results (RBOC and Non-Rural other ILECs)**

|  | 2005                | 2006                 | 2007                 | 2008                 |
|--|---------------------|----------------------|----------------------|----------------------|
| <b>SCENARIO 1:</b>   |                     |                      |                      |                      |
| Switched Access Revenues and Incremental DSL assuming continued application of reciprocal compensation                     | \$8,342,277,908     | \$6,765,305,551      | \$5,280,408,136      | \$4,872,334,444      |
| <b>SCENARIO 2:</b>   |                     |                      |                      |                      |
| Switched Access Revenues and Incremental DSL assuming application of interstate switched access revenues                   | \$6,417,219,221     | \$6,876,615,686      | \$5,440,397,936      | \$5,086,930,639      |
| Impact on Switched Access Revenues   | \$114,056,833       | \$167,253,570        | \$236,022,813        | \$311,777,766        |
| Impact on Incremental DSL Revenues   | (\$39,115,520)      | (\$36,943,455)       | (\$76,032,812)       | (\$90,131,572)       |
| <b>Overall Impact on Switched Access Charges and DSL Revenues Associated with Applying Switched Access Charges to VoIP</b> | <b>\$74,941,313</b> | <b>\$111,310,115</b> | <b>\$153,989,800</b> | <b>\$213,596,195</b> |

For purposes of identifying the initial switched access increase associated with *Scenario 2* relative to *Scenario 1* (*i.e.*, difference between the application of switched access charges relative to the application of reciprocal compensation rates), see row entitled "*Impact on Switched Access Revenues*" (a total of \$114,056,833 in 2005). For purposes of understanding the revenue impacts of the demand suppression for ILEC DSL services that could be expected to result from the application of switched access charges, see row entitled "*Impact on Incremental DSL Revenues*" (a total of (\$39,115,520) in 2005). The sum of these two values generates the overall impact described in Table 1 above.

The tables above represent the various impacts as a gross dollar value. The table below provides the same information as a percentage of total RBOC and non-rural other ILEC switched access revenues:

<sup>13</sup> More generically, if it can be assumed that VoIP is a value-added feature applicable to a broadband connection, increased prices for VoIP services would tend to lower demand for broadband connections as a whole (*ceteris paribus*).

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**Table 3**  
**Impact in Percentage Terms (RBOC and Non-Rural other ILECs)**

|  | 2005            | 2006            | 2007            | 2008            |
|--|-----------------|-----------------|-----------------|-----------------|
| <b>DSL + Switched Access Revenue Impact</b>  |                 |                 |                 |                 |
| Increase in Switched Access and DSL Revenue  | \$74,941,313    | \$111,310,115   | \$159,989,800   | \$213,596,195   |
| Total Switched Access and Incremental DSL Revenue (assuming interstate access applies to VoIP) | \$6,417,219,221 | \$5,876,615,666 | \$5,440,397,836 | \$5,085,930,639 |
| Increase as a Percentage   | 1.17%           | 1.89%           | 2.94%           | 4.20%           |
| <b>Switched Access Revenue Impact</b>  |                 |                 |                 |                 |
| Increase in Switched Access Revenue (assumes switched access applies to VoIP)                  | \$114,056,323   | \$167,253,570   | \$236,323,613   | \$311,777,786   |
| Total Switched Access Revenue (assumes switched access applies to VoIP)                        | \$6,360,757,141 | \$5,852,841,846 | \$5,138,268,637 | \$4,693,294,353 |
| Increase as a Percentage   | 1.82%           | 2.96%           | 4.60%           | 6.64%           |

As Table 3 above indicates, to the extent interstate switched access charges were to apply to IP-PSTN VoIP traffic, the RBOCs and non-rural ILECs could expect to see their intercarrier compensation revenues increase by 1.82% in 2005 with that percentage growing to 6.64% in 2008. However, if we factor in the offsetting impact of DSL demand suppression that is likely to result from the application of switched access charges, net DSL and intercarrier revenues could be expected to grow from just above 1% in 2005 to approximately 4.2% in 2008.

While the focus of our model and underlying analysis is the RBOC and non-rural ILECs' switched access revenues (and the impact on that revenue stream relative to forbearance), the relationship between VoIP and DSL as complementary services couldn't be ignored. Between third quarter 2003 and third quarter 2004 the RBOCs alone added over 3.6 million new DSL lines to their networks (bringing the total for the RBOCs to just shy of 11 million DSL subscribers at the end of third quarter 2004).<sup>14</sup> DSL subscribership is driven by many factors, dominant among them being the consumer's appetite for faster access to Internet applications. Yet, as VoIP services become accepted more readily by consumers and marketed more heavily by suppliers, the demand for VoIP services is certain to extend to consumers who do not yet have a broadband connection. As such, VoIP is likely to drive additional broadband demand including increased demand for ILEC DSL services. For these reasons, the increased revenues resulting from incremental DSL demand caused exclusively, or in part, by VoIP services must be considered when evaluating the overall economic impact of VoIP technology substitution on ILECs.

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<sup>14</sup> VoIP Impact Model, RBOC DSL Analysis Tab.

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There are a number of interesting interactions that the model highlights with respect to DSL stimulation from VoIP. First, to the extent ILECs lose *access lines* as a result of VoIP substitution (contrasted with simple traffic loss), they see a relative increase in DSL subscribership. While this increase is not 1:1, the analysis indicates a strong, direct-causal relationship between the growth of VoIP services and DSL subscribership, *i.e.*, as VoIP grows, DSL demand grows accordingly (as would be expected). Second, the analysis shows that the FCC's decision related to the *Level 3 Petition* is likely to affect not only the growth rate of VoIP, but also growth prospects for the enabling broadband products that support it (some of which are ILEC DSL products). For example, if interstate switched access rates become the standard intercarrier compensation mechanism for VoIP traffic, the underlying increase in VoIP costs related to that change will translate not only to diminished VoIP demand but diminished broadband demand, including demand for ILEC DSL services.

It is important to note that the data presented in Table 1, Table 2 and Table 3 above does not consider the additional revenues that ILECs will certainly enjoy by expanding their own VoIP services (nor does it consider the subsequent demand and revenue decrease they will also experience for VoIP services were interstate switched access rates applied to VoIP traffic). The information above measures only the relative impact of intercarrier compensation revenue gains/losses with gains/losses in incremental DSL revenues stimulated by the widespread acceptance of VoIP services.

It was noted above that several other factors must also be considered so as to understand this data in the proper context:

- i. The model does not consider the impact of expanding interstate access charges to cover "local" VoIP termination.

Some stakeholders have taken the position that interstate access charges should apply to all VoIP traffic, even traffic that, under any other paradigm, would be considered local traffic.<sup>15</sup> For example, SBC has filed a tariff (the "True IP to PSTN" or "TIPToP" tariff) that would apply an interstate access charge to all IP-PSTN traffic terminating to a PSTN end user.<sup>16</sup> Requiring a VoIP provider to terminate "local" communications at interstate access rates rather than reciprocal compensation rates would further increase the VoIP provider's costs and drive up consumer prices for VoIP. This impact would become even more significant as more consumers adopt VoIP as a full replacement for ILEC wireline local service, in addition to toll services which appear to be the primary focus of VoIP users today. With cable company VoIP offerings and subscribership

<sup>15</sup> See e.g., *IP-Enabled Services*, Comments of SBC Communications, Inc., WC Docket No. 04-36 at 27-33 (filed May 28, 2004).

<sup>16</sup> See Southwestern Bell Telephone Tariff FCC No. 73, Transmittal No. 3019 (filed November 24, 2004).

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increasing, the effect of applying interstate access charges on IP-PSTN IP-enabled services could be substantial.

- ii.* The results assume that the FCC does not begin significant intercarrier compensation reform prior to 2008, and that states continue only to make modest reductions in intrastate access charges.

The default assumptions in the model assume that interstate access rates do not decline through 2008, and that intrastate access rates decline only five percent per year from 2005 through 2008. Alternatively, however, the analysis could consider the relief requested in the *Level 3 Petition* as an interim transitional measure until the Commission (or the Commission and the states) adopts intercarrier compensation reform. If the FCC (or the FCC and the states) begins to implement significant or comprehensive intercarrier compensation reform prior to 2009, the revenue gain to the ILECs from imposing access charges on IP-PSTN IP-enabled services would be substantially reduced, as would the ILECs' vulnerability to VoIP substitution.

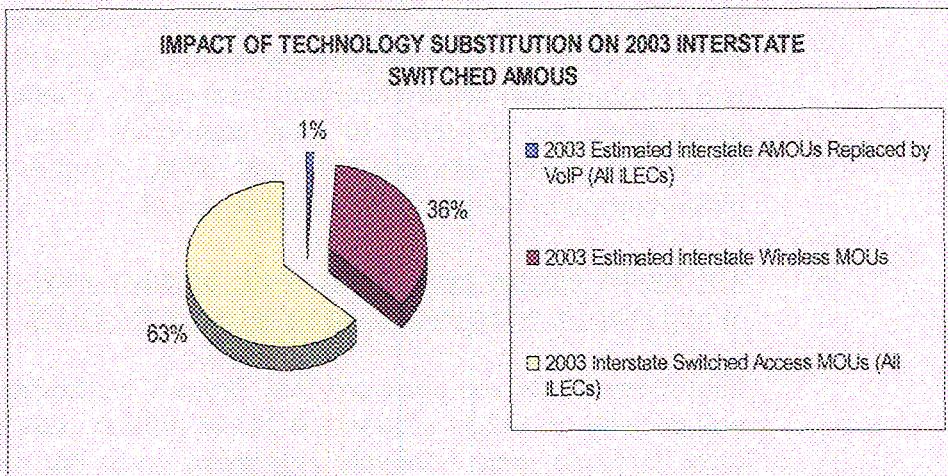
For example, if the FCC (or FCC and states) were to implement a comprehensive intercarrier compensation reform program that, beginning in 2005, reduced interstate access charges over four years to the ISP-bound compensation rate of \$0.007 (assuming linear reductions), the model results would be as follows:

|   | 2005          | 2006          | 2007          | 2008           |
|---|---------------|---------------|---------------|----------------|
| Impact of Change in VoIP Intercarrier Compensation Regime on Total ILEC Non-Local Intercarrier Compensation Revenue (Access Applied to VoIP)                              | \$114,056,833 | \$127,585,004 | \$124,041,715 | \$89,847,531   |
| Impact of Change in VoIP Intercarrier Compensation Regime on Total ILEC Non-Local Intercarrier Compensation Revenue with Incremental DSL Revenue (Access Applied to VoIP) | \$74,941,313  | \$71,641,549  | \$48,008,902  | (-\$8,334,041) |

It should be noted that these results, and the ILECs' reduced vulnerability to IP-PSTN VoIP-based substitution, are independent of the issue of whether and to what extent the FCC or states allow ILECs to recoup revenues lost through reduced access charges in other rates or universal service support as a part of an intercarrier compensation reform plan. In any event, prompt initiation of intercarrier compensation reform reduces both the benefit to the ILECs of imposing access charges on VoIP, and the ILECs' vulnerability to VoIP substitution.

- iii.* Substitution of wireless for traditional toll services has had, and will continue to have, a far greater impact on ILEC switched access revenues than will VoIP in the next four years.

Wireless services are used by consumers today to make non-local calls that were formerly carried by LECs and for which those LECs previously recovered switched access charges.<sup>17</sup> As a result of flat-rated wireless long distance packages and other real or perceived benefits of wireless services, consumers are replacing traditional landline voice toll services with wireless non-local voice services at an accelerating pace. This consumer-driven technology substitution from wireline to wireless dwarfs VoIP substitution today, and the analysis indicates that it will continue to dwarf VoIP substitution throughout the study period (through 2008). As a point of reference, the chart below for 2003 provides the relative interstate<sup>18</sup> voice market share for each of the three technologies at issue (*i.e.*, landline toll, wireless and non-local VoIP):



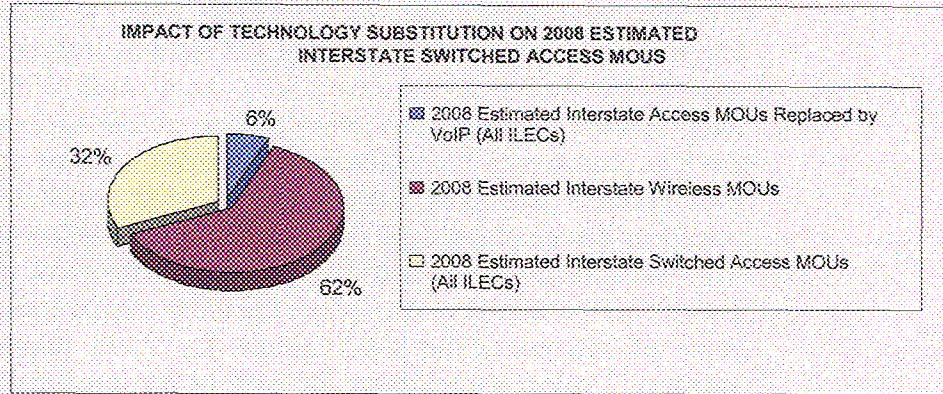
In 2003, wireless substitution accounted for approximately 36% of all interstate voice traffic, compared to a still relatively large share of 63% for traditional landline toll services. Non-local VoIP services, on the other hand, accounted for less than 1%.

However, wireless market share has continued to grow steadily. We project that for 2005, wireless will comprise approximately half of the total interstate minutes of use. Further, while VoIP will make substantial penetration progress by 2008, based on current trends, wireless will have become the principal technology for long distance calling. The following chart shows the projected composition of these interstate minutes in 2008:

<sup>17</sup> As with VoIP, some non-local wireless calls are still subject to access charges on the "distant" (wireline) end of the call, but many are not, and these calls would have been subject to access charges at both ends if they had been made from a wireline phone.

<sup>18</sup> Due to the limited availability of the wireless traffic data, only interstate jurisdiction was chosen.

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By 2008, it is anticipated that wireless will constitute 62% of the market for interstate calls, with traditional landline comprising only 32%. IP-PSTN VoIP minutes, while growing rapidly in year-over-year terms, will still constitute only about 6% of non-local usage. Wireless minutes, on the other hand, are expected to gain significant share, growing by 26 percentage points between 2003 and 2008, compared to VoIP's five percentage point increase over the same period.

- iv. The model ignores peer-to-peer VoIP products such as Skype or Free World Dial-Up when those calls do not reach the PSTN.

One recent study has projected that Skype's worldwide subscriber base will be between 142.54 million and 245.66 million users by 2008.<sup>19</sup> While these forecasts seem relatively aggressive given our research related to technology adoption in this area, it is clear that as Skype and other peer-to-peer services gain more users, and as there are more IP-based end users in general, a greater amount of "non-local" calling (and "local" calling as well) will be made entirely outside the PSTN. Like wireless-to-wireless calling, this will reduce the total amount of minutes traversing the traditional wireline PSTN, whether using traditional toll services or IP-PSTN IP-enabled services.

The model does not attempt to capture this migration from services that use or interact with the PSTN to services that avoid the PSTN altogether. To the extent this migration is significant, overall volumes would be suppressed, and, at a minimum, the ILECs would receive less benefit from applying interstate access charges to IP-PSTN VoIP.

- v. The model results ignore entirely the ILECs' own VoIP service revenues, which continue to grow.

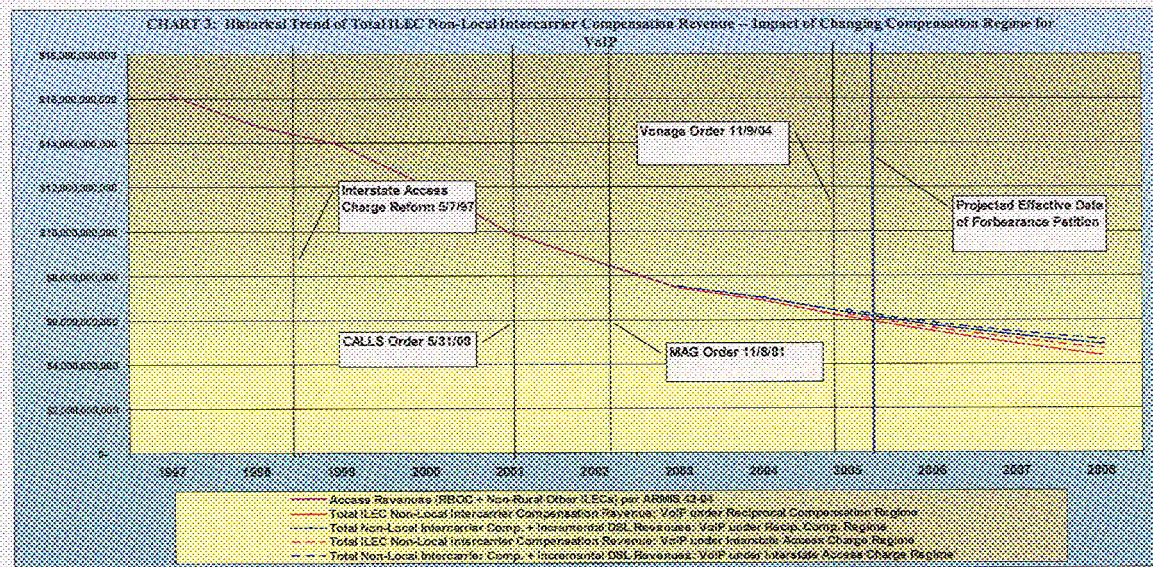
<sup>19</sup> Evaluserve, *Impact of Skype on Telecom Service Providers at 5* (January 6, 2005).

Although the model attempts to estimate the impact on ILEC revenues of the reduced stimulation of broadband, including DSL, when interstate access charges are applied to VoIP, the model does not consider the additional revenues that ILECs will certainly enjoy by expanding their own VoIP services (nor the subsequent VoIP demand and revenue decrease ILECs would experience if access charges are applied). The RBOCs' own marketing information shows that they are transitioning to VoIP for both business and residential offerings. As mentioned above, all RBOCs (Verizon, SBC, Qwest and BellSouth) provide VoIP services to business customers, and at least Qwest (OneFlex) and Verizon (VoiceWing) currently offer residential VoIP services, with SBC trialing residential VoIP. All indications are that RBOC deployment of VoIP services will only increase through 2008.

Finally, it bears noting that the FCC and the industry have been working diligently over the past 10 years (or more) to remove implicit subsidies included in ILEC switched access rates, and otherwise to reform those rates. They have accomplished this task, *inter alia*, by moving revenue previously recovered via traffic sensitive rate elements to non-traffic sensitive rate elements. Confirming application of reciprocal compensation rates for VoIP traffic during the transition to more comprehensive reform simply extends this trend (albeit at a much less aggressive pace than past switched access reform initiatives, e.g., *CALLS Order*, *MAG Order*, etc.).

A simple review of RBOC and non-rural other ILEC switched access revenues over time indicates that substantial reductions in traffic-sensitive revenues have resulted from numerous reform efforts. The impact of approving the *Level 3 Petition* extends this type of reform during the transition to more comprehensive reform that is underway. However, the impact of approving the *Level 3 Petition*, and rejecting ILEC attempts to apply interstate or intrastate access to IP-PSTN IP-enabled services, pales noticeably in comparison to past reform efforts in its anticipated impact on RBOC and non-rural other ILEC switched access revenues:

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The chart above, taken directly from the QSI analysis, shows the reduction in RBOC and non-rural other ILEC switched access revenues from 1997 through projected 2008 (assuming the FCC approves the *Level 3 Petition*). As the chart depicts, even for those who might interpret the approval of the *Level 3 Petition* as a loss in switched access revenues (an assumption we do not make), it is clear that, as a transition mechanism, forbearance both (a) is consistent with and (b) has less of an impact than past reform efforts.

## II. VOIP IMPACT MODEL

### A. Model Design

QSI was tasked with quantifying the revenue impact, were the Commission to deny the *Level 3 Petition*, and adopt rules allowing ILECs to assess interstate switched access charges on IP-PSTN IP-enabled services. In response to that task QSI has developed an analytical tool that allows the user – through substantial underlying data and user-adjustable inputs – to model various scenarios that are likely to impact the intercarrier compensation revenue streams of RBOC and non-rural other ILECs. We refer to the analytical tool resulting from our analysis as the *VoIP Impact Model*. The *VoIP Impact Model* is a Microsoft® Excel-based tool designed with accuracy, transparency, auditability, and user-friendliness as primary objectives.

The *VoIP Impact Model* is based entirely on publicly-available information, much of which is taken directly from FCC and NECA reports. Substantial care was taken to provide the user with cites to source data throughout the model. In addition to publicly-available information, the nature of the model requires data forecasted into future time periods. In an effort to maximize the reliability of the forecasted information, QSI reviewed myriad VoIP forecasts and reports by respected industry sources. Further, user-adjustable inputs were incorporated into the model to allow users of the model to perform sensitivity analyses using inputs and assumptions they find to be most reasonable (including key cost drivers). Hence, while QSI has gone to great effort to populate the model with inputs and assumptions most reasonably representing discernable market characteristics, if the user disagrees with any *default* input values used by QSI, the user can readily change them, and the model will automatically calculate revised results based on those input changes. Finally, QSI has designed the model with the user in mind by including helpful navigation links and other features that assist the user in viewing results and understanding the underlying data locations, calculations and sources. We would like to stress the point that this model is a *tool* and it is designed to provide any user with the necessary conceptual vehicle by which to forecast the impact of various scenarios. It is our intention to add insight into the impacts of the *Level 3 Petition*, and ILEC requests in the comments in the Commission's *IP-Enabled Services NPRM* to apply access charges to IP-enabled services, so as to allow the FCC to make a more reasoned decision.

### B. Purpose of Model

The purpose of the *VoIP Impact Model* is to estimate and compare the potential impact on RBOC and non-rural other ILEC switched access revenue<sup>20</sup> stemming from either

<sup>20</sup> Since granting Level 3's petition would result in the FCC confirming that reciprocal compensation should be paid for non-local VoIP traffic, the term "intercarrier compensation" is also used in this report

## VoIP Impact Model

VoIP compensation *Scenario 1* (reciprocal compensation) or VoIP compensation *Scenario 2* (interstate switched access charges) (*see, infra*, Section I).<sup>21</sup> If approved, the *Level 3 Petition* would require IP-PSTN traffic<sup>22</sup> to be exchanged between carriers at reciprocal compensation rates in accordance with Section 251 of the Act. Since access charges have not historically been paid for the traffic for which Level 3 seeks forbearance, and reciprocal compensation historically has applied,<sup>23</sup> approval of the *Level 3 Petition* would maintain the current *de facto* compensation methodology for this traffic (referred to throughout this report as *Scenario 1*). Following the recent FCC *Vonage Order*,<sup>24</sup> which pre-empted states from regulating VoIP services exhibiting characteristics similar to Vonage's DigitalVoice Service, QSI's analysis and the *VoIP Impact Model* assume that the alternative compensation scheme (*Scenario 2*) for non-local VoIP traffic is interstate, but not intrastate, switched access charges.<sup>25</sup>

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and includes switched access charges as well as reciprocal compensation for non-local VoIP traffic. Intercarrier compensation, as that term is used in this Report, does not include reciprocal compensation for non-incidental local PSTN to PSTN traffic subject to Section 251 of the Telecommunications Act.

<sup>21</sup> By focusing only on "non-local" traffic, the study maintains an apples-to-apples comparison using the same universe of traffic. Some ILECs, however, have proposed to charge access charges whenever IP-PSTN VoIP traffic is terminated, even where the geographic end-points of the call are in the same ILEC local calling area. If ILECs were allowed to apply access charges in such a manner, ILEC revenue would further increase above that shown in this model, as ILECs would receive interstate access charges (averaging approximately \$0.006 per minute) for terminating traffic within the same ILEC local calling area, rather than reciprocal compensation (usually approximately \$.0007 per minute). We note that by limiting our analysis to PSTN termination of "non-local" VoIP traffic, we in no way reach a conclusion that it is possible or appropriate to distinguish "local" from "non-local" IP-enabled traffic.

<sup>22</sup> This includes traffic that originates PSTN and terminates IP (other than 1+ and dial-around traffic), as well as traffic that originates IP and terminates PSTN. *See Level 3 Forbearance Petition* at 1. Traffic exchanged with a rural telephone company that remains exempt from an ILEC's Section 251(c) obligations is also exempt from the *Level 3 Petition*. *See Level 3 Petition* at 2.

<sup>23</sup> Level 3 states as follows in its Forbearance Petition: "Voice-embedded IP communications, particularly IP-PSTN communications, have been originated and terminated outside the interstate and intrastate access charge regimes. Although RBOCs in interconnection negotiations have taken the position that access charges should be assessed on IP-PSTN communications, resolution of these disputes are often deferred with both parties reserving their respective rights. Under that relatively uncertain bargain, the *de facto* reality has been that Voice-embedded IP communications between a CLEC and an ILEC are generally exchanged under reciprocal compensation agreements pursuant to Section 251(b)(5) of the Act, except where a CLEC specifically routes that traffic over Feature Group D trunks." *Level 3 Petition* at 22-23.

<sup>24</sup> *See Vonage Order*, 19 FCC Rcd at 22411-12 ¶ 14; 22413-14 ¶ 18; 22424 ¶ 32; 22432 ¶ 46.

<sup>25</sup> The FCC's *Vonage Order* at ¶ 32, described these characteristics as follows: "Specifically, these basic characteristics include: a requirement for a broadband connection from the user's location; a need for IP-compatible CPE; and a service offering that includes a suite of integrated capabilities and features, able to be invoked sequentially or simultaneously, that allows customers to manage personal communications dynamically, including enabling them to originate and receive voice communications and access other features and capabilities, even video. In particular, the provision of tightly integrated communications capabilities greatly complicates the isolation of intrastate communication and counsels against patchwork regulation. Accordingly, to the extent other entities, such as cable companies, provide VoIP services, we would preempt state regulation to an extent comparable to what we have done in this Order." *Id.* at 22424 ¶ 32 (footnotes omitted).

At the highest level, the *VoIP Impact Model* forecasts the extent to which applying interstate switched access charges to the non-local VoIP traffic covered by the *Level 3 Petition* would affect RBOC and non-rural other ILEC switched access revenues and broadband revenues by (1) estimating the volumes of switched access minutes that will be replaced by VoIP services during the study period – based on FCC and NECA data, as well as published VoIP forecasts from numerous industry analysts<sup>26</sup> – (2) calculating net ILEC intercarrier compensation revenue associated with VoIP traffic under the two alternative compensation regimes for non-local VoIP traffic – *i.e.*, reciprocal compensation and interstate switched access, and (c) calculating the extent of incremental DSL revenue caused by the availability of VoIP under each of the two scenarios. The remainder of this report provides a detailed description of the model's calculations, inputs and results.

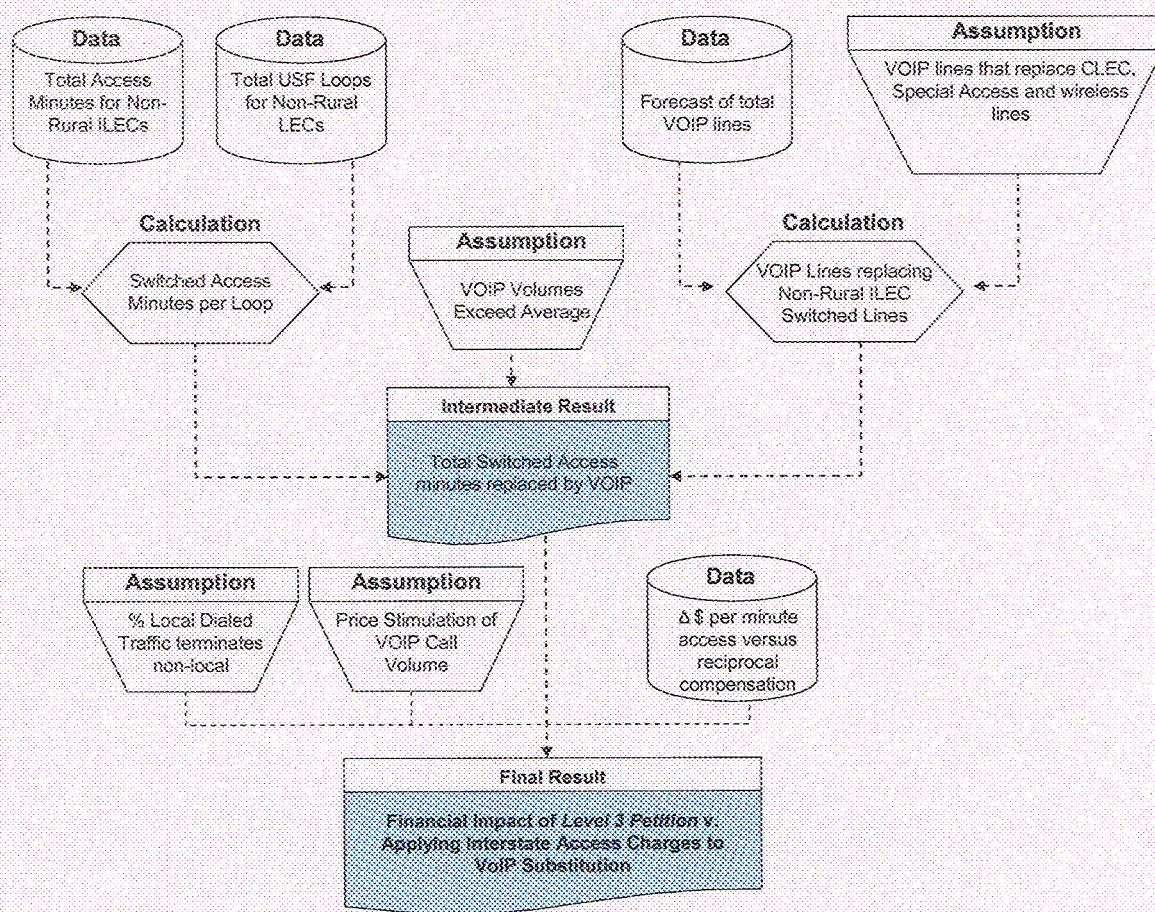
<sup>26</sup> Though QSI's VoIP forecast is based primarily on Telecommunications Industry Association (TIA) data, QSI compiled and reviewed VoIP projection data from a number of additional sources to ensure that the forecast used in the model is reasonable. One such supporting source is a VoIP forecast contained in the Yankee Group Report entitled, *Despite Uncertainty, Leading Telephony Industry Players Commit To Mass Market VoIP Deployment*, June 2004 (see also, *infra*, footnote 9). This same report was referenced by FCC Chairman Michael Powell at an industry conference on October 19, 2004. See Mark Jewell "US Argues for Federal VoIP Rules," October 20, 2004.

## Overview of the Model

### III. OVERVIEW OF THE MODEL

The *VoIP Impact Model* is comprised of numerous spreadsheets which perform various functions. For ease of understanding, the worksheets of the model are color coded and grouped into the following three categories: (1) results worksheets (tab color: light yellow), (2) intermediate calculations (tab color: green) and (3) supporting worksheets (tab color: grey). The information contained in the supporting worksheets (*i.e.*, the grey tabs) does not flow directly into the main results.

The following flow diagram provides an overview of the underlying model methodology:



As the diagram above illustrates, the model undertakes the following basic worksteps:

## Overview of the Model

1. Calculates per-line access minutes for RBOCs and non-rural other ILECs<sup>27</sup> (the *Level 3 Petition* specifically excludes the substantial majority of non-RBOC rural areas);<sup>28</sup>
2. Calculates the quantity of VoIP lines replacing ILEC switched access lines based upon total VoIP penetration (utilizing VoIP industry forecasts). Because industry forecasts generally track the growth of VoIP *in total*, and do not differentiate between ILECs, CLECs or other carriers that are likely to lose access lines to VoIP, the model – in an effort to maintain focus on RBOC and non-rural other ILEC revenues – removes forecasted VoIP lines likely to replace CLEC, wireless, or special access lines (as opposed to RBOC and non-rural other ILEC switched access lines).
3. Calculates the total quantity of switched access minutes replaced by VoIP as a product of (a) VoIP lines replacing ILEC switched access lines, (b) per line switched access minutes-of-use attributable to the switched access lines being replaced and (c) a factor recognizing that consumers choosing VoIP are likely to be users with higher than average calling patterns.
4. Derives, on a per-minute-of-use basis, the intercarrier compensation revenues RBOC and non-rural other ILECs are likely to recover as a result of either *Scenario 1* or *Scenario 2*. Because a move from reciprocal compensation (*Scenario 1*) to switched access (*Scenario 2*) would change not only the per-minute rate required, but also the directional nature of the revenue flow in some circumstances, a per-minute “netting” of these two potential scenarios must be accomplished by the model (switched access charges flow solely to the LECs whose networks are being used to originate and terminate the call, while under reciprocal compensation regime the ILEC who originates the call would *pay* intercarrier compensation and the ILEC who terminates the call would *receive* such compensation).
5. Calculates the switched access revenue impact<sup>29</sup> on ILECs of the *Level 3 Petition* as a product of the per-minute net revenue impact described in #4 above and the quantity of switched access minutes replaced by VoIP as described in #3 above.

The model compares this calculated impact to the Total ILEC Non-Local Intercarrier Compensation (or the total monies received by ILECs for non-local VoIP and non-VoIP traffic). The purpose of this comparison is to put the impact of the *Level 3 Petition* in perspective by showing the impact of applying interstate access versus reciprocal

<sup>27</sup> For purposes of this report, the term “ILEC” should be assumed to be RBOC and non-rural other ILECs unless otherwise stated.

<sup>28</sup> The Level 3 Forbearance Petition excludes those areas served by a rural telephone company that remains exempt from Section 251(c) pursuant to Section 251(f)(1). See *Level 3 Petition* at 10.

<sup>29</sup> Since it is assumed that reciprocal compensation would apply under Scenario 1, this impact may also be referred to as the intercarrier compensation impact.

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## Overview of the Model

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compensation to IP-PSTN IP-enabled traffic in relation to the total access revenue streams that ILECs receive.

The analysis also compares the Petition's impact on the non-local intercarrier compensation net revenues to the effect wireless services have had and will have on ILEC switched access revenue. This comparison is designed to provide a broader context as it allows the user to compare the *Level 3 Petition* and any impact it may have on ILEC switched access revenues, with the broader technology substitution effectuated by wireless telephony and its likely impact on those same revenues.

The model further calculates the *additional* DSL revenue ILECs are likely to recover from end users who purchase DSL in order to subscribe to VoIP (what is generally referred to in the model as "stimulated DSL revenue"). This information is meant to allow the user to compare the impact of applying interstate access to VoIP not only on intercarrier compensation revenues (wherein applying access would generate higher revenues), but also to a broader revenue base comprised of both intercarrier compensation and DSL revenues (wherein applying access charges to VoIP is likely to cause reduced DSL revenue, because of reduced impetus for a consumer to purchase broadband services).